EQUINOX

SuperSerial Technology
SST-8I/RJ Multiport Board
Hardware Reference Guide

SuperSerial™ Technology

PN 560127/A
June 1997

Overview

Equinox SuperSerial Technology (SST) RJ Boards are intelligent, high-speed (up to 921.6 kbps) *multiport boards* providing high performance serial I/O solutions for ISA bus systems. All port interfaces are standard RS-232 with partial modem control (one control signal out and two control signals in) and voltage surge protection. (If your application requires EISA, PCI, Micro Channel bus and/or full modem control, contact your Equinox reseller for information on other SST products.)

SST Boards appear to the system host processor as memory. That is, they are memory mapped devices. Each board is automatically mapped into system memory at the time of device driver installation. The device driver soft-configures all boards each time the system is initialized (booted). See PN 560093 (Windows NT, Windows 95, Novell AIO, and OS/2), PN 560084 (UNIX SVR3.2, SCO, and XENIX) or PN 560085 (UNIX SVR4 STREAMS) for detailed device driver information.

The SST board (shown in Figure 1 below) occupies a single ISA slot in the host computer and provides the intelligent functions to "off-load" the CPU serial communications processing tasks.

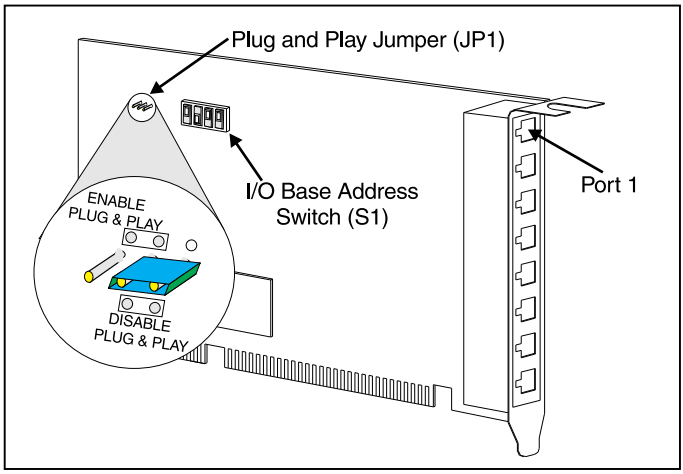


Figure 1. SST-8I/RJ Multiport I/O Board

Use the following procedure to install your SST-8I/RJ Board. Alternatively, you may follow the installation instructions presented in your host system documentation.

1. Set the host computer system power switch to OFF and disconnect the power cord.
2. Locate a free expansion slot.
3. Insert and secure the board firmly into the expansion slot.
4. Replace the power cord and turn the host computer system ON.

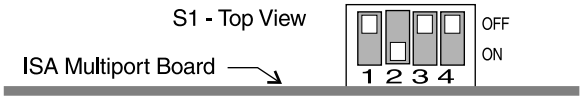
Plug and Play

ISA SuperSerial Technology Boards must be assigned a unique I/O base address. This can be accomplished by the use of ISA Plug and Play (PnP) or the I/O Base Address Switch S1.

PnP for ISA boards is not currently supported by all Operating Systems (OS). Consult your OS documentation to determine if it supports PnP.

If PnP is not supported by your OS, or if you are unsure, place the PnP jumper (JP1) in the position closest to switch S1. This will disable PnP and enable the 4 position I/O Base Address switch as shown below.

If multiple ISA boards are installed in the same system, a different address must be assigned to each board. (This is automatically accomplished if PnP is utilized.) This procedure should be performed before the board is physically installed.



1	2	3	4	Base Address
OFF	OFF	OFF	OFF	200
ON	OFF	OFF	OFF	220
OFF	ON	OFF	OFF	240
ON	ON	OFF	OFF	260
OFF	OFF	ON	OFF	280
ON	OFF	ON	OFF	2A0
OFF	ON	ON	OFF	2C0
ON	ON	ON	OFF	2E0
OFF	OFF	OFF	ON	300
ON	OFF	OFF	ON	320
OFF	ON	OFF	ON	340
ON	ON	OFF	ON	360
OFF	OFF	ON	ON	380
ON	OFF	ON	ON	3A0
OFF	ON	ON	ON	3C0
ON	ON	ON	ON	3E0

Table 1. I/O Base Address Switch Selections

Device Cabling

Figure 2 below shows the RJ-11 port orientation and pin-outs for the SST-8I/RJ. Note that pin 3 acts as Data Terminal ready (DTR) when connected to a modem (i.e. it will be dropped when the operating system wants to disconnect the call). It will act as Request To Send (RTS) when a device is directly connected and hardware flow control is enabled.

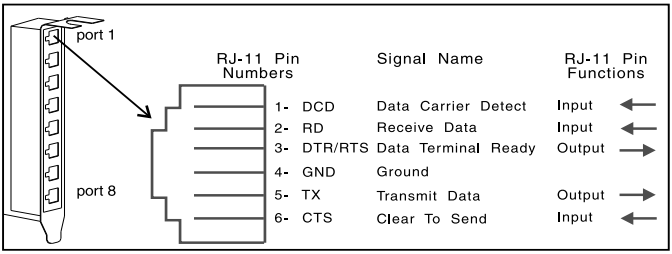


Figure 2. SST-8I/RJ Port pin-outs

Below and following on the next page (see figures 3, 4 and 5) are three cable diagrams detailing how to build your own cables to go between a SST-8I/RJ and your terminals, printers, PCs, modems, etc.

Signal	*Pin #*		*Pin #*	*Signal*
			8	Carrier Detect
Carrier Detect	1		4	Request To Send
Receive Data	2		2	Transmit Data
Data Terminal Ready / Request To Send	3		6	Data Set Ready
			5	Clear To Send
Signal Ground	4		7	Signal Ground
Transmit Data	5		3	Receive Data
Clear To Send	6		20	Data Terminal Ready

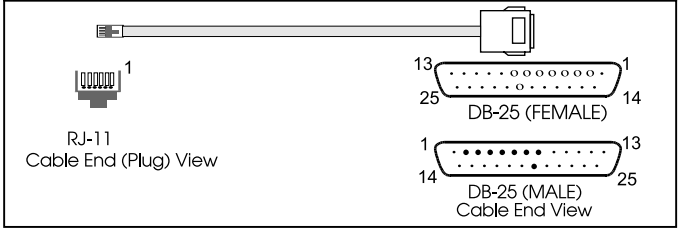


Figure 3. Cable pin-outs for SST-8I/RJ to Terminal or Printer DB-25

Device Cabling (continued)

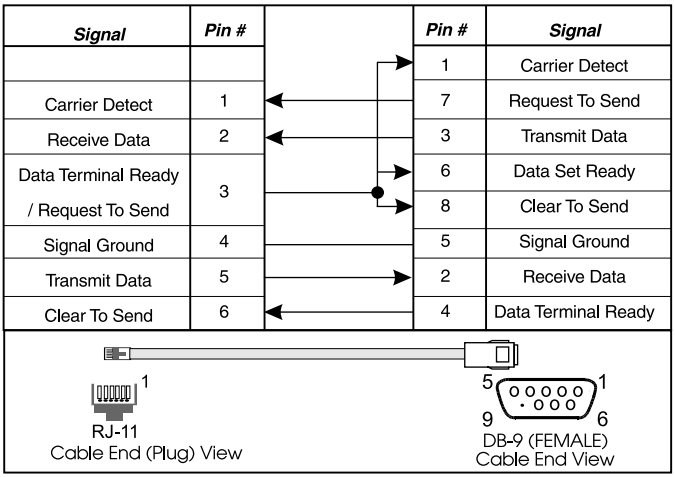


Figure 4. Cable pin-outs for SST-8I/RJ to PC DB-9

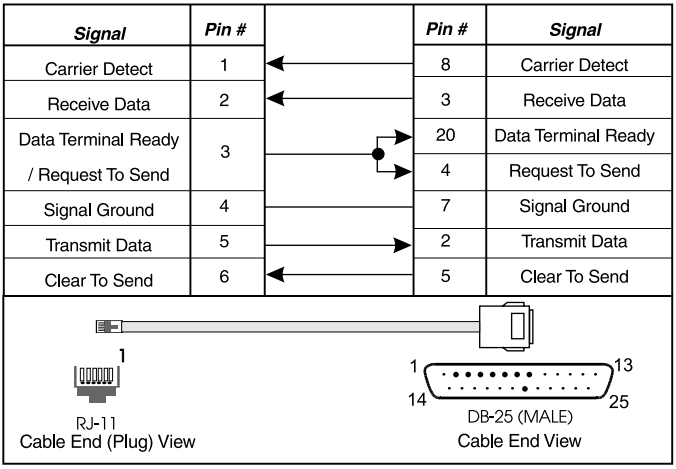


Figure 5. Cable pin-outs SST-8I/RJ to Modem DB-25

Diagnostics

Use Equinox RJ Loopback connector 750082 with the ssdiag or eqnloop diagnostic utility (see software manual PN 560084, PN 560085, or PN 560093) and set parameters to external loopback.

Modular Adaptors

Modular adaptors are available to convert modular jacks to DB-25 or DB-9 connectors. Table 2 below describes the modular adaptors available from Equinox. Use a standard reversing 4-wire (data only) or 6-wire RJ-11 modular cable with these adaptors.

P/N	Connector	Connects To
210081	DB-25 DCE male	terminal or printer (female)
210082	DB-25 DCE female	terminal or printer (male)
210083	DB-25 DTE male	modem or multiplexer (female)
210084	DB-25 DTE female	DCE devices (male)
210085	DB-9 female	DB-9 PC (male)

Table 2. Modular Adaptors

The adapters listed in table 2 above, with modular cables as shown below in table 3 may be used to attach devices to the SST-8I/RJ. The outer two wires which support control signals are omitted when using 4-wire cables. Standard modular cables used for telephones are always reversing (e.g., pin 1 is connected to pin 4, etc.) and are typically 4-wire. If a user supplied modular cable is used, *make sure the cable is reversing* (as shown in figure 6 below).

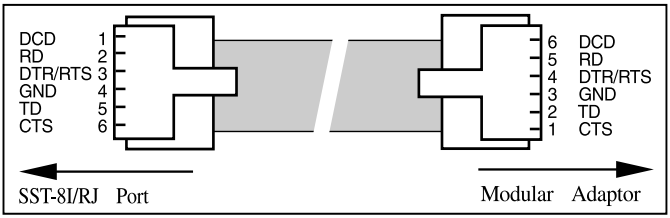


Figure 6. Reversing 6-Wire Modular Cable

The following modular cables are available from Equinox (use with modular adaptors from table 2 above):

P/N	Description
690168	10' 6-wire reversing modular cable
690204	25' 6-wire reversing modular cable
690205	75' 6-wire reversing modular cable

Table 3. Modular Cables

DECLARATION OF CONFORMITY

according to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name:	Equinox Systems Inc.
Manufacturer's Address:	One Equinox Way Sunrise, Florida 33351-6709 USA

declares, that the products

Product Names:	SuperSerial Technology (SST) serial I/O products Megaplex serial I/O products ELS Ethernet terminal servers
Model Numbers:	SST-2, SST-4, SST-8, SST-16, SST-64, SST-128, CP-16, PM-8, PM-16, MIM-1, CMX-16, SSM-8, SSM-12, SSM-24, Megaplex, Megaplex CMX ELS-8, ELS-16
Product Options:	All

conform to the following Product Specifications:

Safety: EN 60950:1992, CSA C22.2 No:950, UL 1950

EMC: EN 55022 (CISPR22 A): 1987E,
FCC Part 15 Class A
EN 50082-1: 1992 - Generic Immunity
IEC 801-2: 1984, 8kV CD, 8kV AD
IEC 801-3: 1984, 3V/m, 27-500MHz
IEC 801-4: 1988, 1kV Power &
0.5kV I/O Lines

Supplementary Information:

The products herewith comply with the requirements of the Low Voltage Directive, 73/23/EEC and the EMC Directive 89/336/EEC, including amendments by the CE-marking Directive 93/68/EEC.

June 9, 1997 Stanley A. Vogt - Director, Manufacturing

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The equipment has been tested and found to comply with the limits for Class A digital devices, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

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Equinox Systems Inc.
One Equinox Way
Sunrise, Florida 33351-6709
(954) 746-9000
Fax: (954) 746-9101
BBS: (954) 746-0282
ftp.equinox.com
www.equinox.com
support@equinox.com